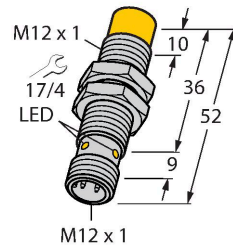


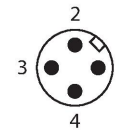
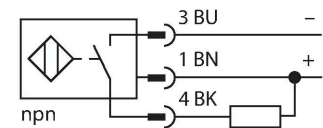
NI8U-EM12-AN6X-H1141 Inductive Sensor



Features

- Factor 1 for all metals
- Protection class IP68
- Resistant to magnetic fields
- Extended temperature range
- High switching frequency
- Auto-compensation protects against pre-damping
- DC 3-wire, 10...30 VDC
- NO contact, NPN output
- M12 x 1 male connector

Wiring diagram



Functional principle

Inductive sensors are designed for wear-free and contactless detection of metal objects. Approx Factor 1 sensors have significant advantages due to their patented ferrite-coreless multi-coil system. They detect all metals at the same large switching distance and are resistant to magnetic fields.

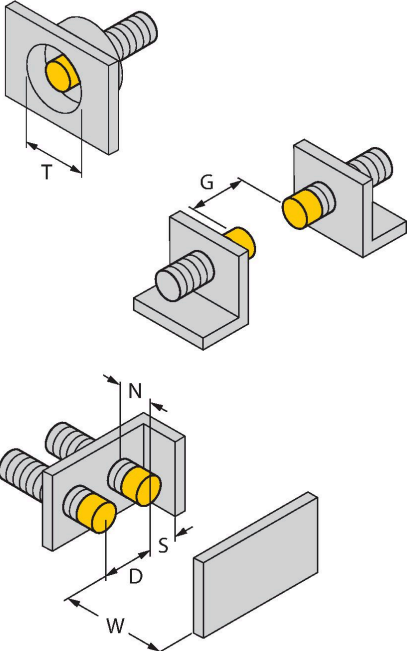
Technical data

| | |
|--|--|
| Type | NI8U-EM12-AN6X-H1141 |
| ID | 1644350 |
| General data | |
| Rated switching distance | 8 mm |
| Mounting conditions | Non-flush, partially embeddable |
| Secured operating distance | $\leq (0.81 \times S_n)$ mm |
| Repeat accuracy | $\leq 2 \%$ of full scale |
| Temperature drift | $\leq \pm 10 \%$ |
| | $\leq \pm 20 \%, \leq -25^\circ\text{C} \vee \geq +70^\circ\text{C}$ |
| Hysteresis | 3...15 % |
| Electrical data | |
| Operating voltage U_B | 10...30 VDC |
| Ripple U_{ss} | $\leq 10 \%$ U_{Bmax} |
| DC rated operating current I_o | ≤ 200 mA |
| No-load current | ≤ 25 mA |
| Residual current | ≤ 0.1 mA |
| Isolation test voltage | 0.5 kV |
| Short-circuit protection | yes/Cyclic |
| Voltage drop at I_o | ≤ 1.8 V |
| Wire break/reverse polarity protection | yes/Complete |
| Output function | 3-wire, NO contact, NPN |
| DC field stability | 300 mT |
| AC field stability | 300 mT _{ss} |
| Insulation class | □ |

Technical data

| | |
|---------------------------------------|---|
| Switching frequency | 1 kHz |
| Mechanical data | |
| Design | Threaded barrel, M12 x 1 |
| Dimensions | 52 mm |
| Housing material | Stainless steel, 1.4301 (AISI 304) |
| Active area material | Plastic, PBT |
| Max. tightening torque of housing nut | 10 Nm |
| Electrical connection | Connector, M12 x 1 |
| Environmental conditions | |
| Ambient temperature | -30...+85 °C |
| Vibration resistance | 55 Hz (1 mm) |
| Shock resistance | 30 g (11 ms) |
| Protection class | IP68 |
| MTTF | 874 years acc. to SN 29500 (Ed. 99) 40 °C |
| Switching state | LED, Yellow |

Mounting instructions

| Mounting instructions/Description | |
|---|------------------------|
|  | Distance D |
| | 3 x B |
| | Distance W |
| | 3 x Sn |
| | Distance T |
| | 4 x B |
| | Distance S |
| | 0.5 x B |
| | Distance G |
| | 6 x Sn |
| | Distance N |
| | 2 x Sn |
| | Diameter active area B |
| | Ø 12 mm |

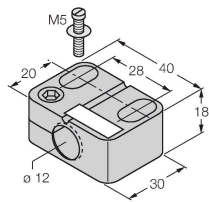
1-side flush mounting possible:
1-side flush mounting: Sr = 6 mm

NI8U-EM12-AN6X-H1141 | 02/21/2025 13-20 | technical changes reserved

Accessories

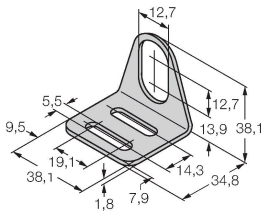
BST-12B 6947212

Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6



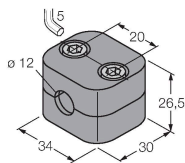
MW12 6945003

Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)

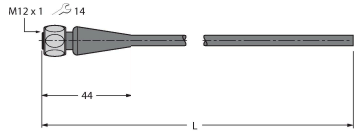
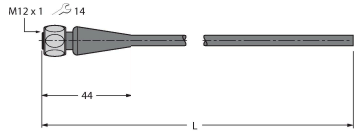


BSS-12 6901321

Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene



Wiring accessories

| Dimension drawing | Type | ID | |
|---|------------|---------|--|
|  | RKH4-2/TFE | 6935482 | Connection cable, M12 female connector, straight, 3-pin, stainless steel coupling nut, cable length: 2 m, jacket material: PVC, gray; temperature range: -25...+80 °C |
|  | RKH4-2/TFG | 6934384 | Connection cable, M12 female connector, straight, 3-pin, stainless steel coupling nut, cable length: 2 m, jacket material: TPE, gray; temperature range: -40...+105 °C |